

**Amendments to the Claims**

This listing of the claims will replace all prior versions, and listings, of claims in this application.

Claim 1 (currently amended): A method for fabricating a porous silica sphere comprising:

heat-treating a plurality of silica gel pellets by increasing their its temperature at a speed of 5 to 90°C per minute to 1050 to 1200°C; and

maintaining the temperature for a predetermined time, wherein the heat-treatment is performed in a rotary tube furnace.

Claim 2 (currently amended): The method of claim 1, wherein the silica gel pellets have has pores with a size of about 20–70 angstroms, and a pore volume of around 0.3 to 1.1 mL/g.

Claim 3 (cancelled).

Claim 4 (original): The method of claim 1, wherein the heat-treatment is performed at an average temperature elevating speed ranging from 10°C to 70°C per minute.

Claim 5 (cancelled).

Claim 6 (currently amended): A method for fabricating a porous silica sphere comprising:

a heat treatment process, wherein a plurality of silica gel pellets are is subjected to a first heat-treatment at 400 to 900°C, and are is subjected to a second heat-treatment at 1050 to 1200°C in which the heat-treatment process is performed using at least two rotary tube furnaces and, in the first heat-treatment,

the temperature in a first rotary tube furnace is increased at an average speed of 35 to 70 °C per minute.

Claim 7 (original): The method of claim 6, wherein the first heat treatment is performed for 20 to 60 minutes, and the second heat treatment is performed for 20 to 60 minutes.

Claim 8 (cancelled).

Claim 9 (currently amended): The method of claim 6, wherein the silica gel pellets are ~~is~~ subjected to the second heat treatment, in a second rotary tube furnace, at a temperature of 1100 to 1150 °C.

Claim 10 (currently amended): The method of Claim 1, wherein the temperature is maintained until the porous silica sphere has a filling density between about 0.18 g mL<sup>-1</sup> and about 0.30 g mL<sup>-1</sup>.

Claim 11 (currently amended): A method comprising:

performing a heat-treatment on a plurality of silica gel pellets for  $n$  minutes, wherein the heat-treatment includes a temperature increasing stage of duration about  $n/2$  minutes, and a temperature maintaining stage of duration about  $n/2$  minutes;

wherein during the temperature increasing stage the silica gel pellets are ~~is~~ heated at between about 5 °C min<sup>-1</sup> and about 70 °C min<sup>-1</sup>;

wherein during the temperature maintaining stage the silica gel pellets are ~~is~~ maintained at between about 1050 °C and about 1200 °C; and

wherein the heat-treatment is performed in a rotary tube furnace.

Claim 12 (previously presented): The method of Claim 11, wherein  $n$  is between about 20 minutes and about 60 minutes.

Claim 13 (new): The method of Claim 11, wherein during the temperature increasing stage the silica gel pellets are heated at between about  $10^{\circ}\text{C min}^{-1}$  and about  $70^{\circ}\text{C min}^{-1}$ .

Claim 14 (new): The method of Claim 6, wherein the silica gel pellets have pores with a size between about 20 Å and about 70 Å, and a pore volume between about  $0.3 \text{ mL g}^{-1}$  and about  $1.1 \text{ mL g}^{-1}$ .